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=> b hcaplus
FILE 'HCAPLUS' ENTERED AT 10:34:03 ON 06 AUG 2004
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FILE COVERS 1907 - 6 Aug 2004  VOL 141 ISS 6
FILE LAST UPDATED: 4 Aug 2004  (20040804/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que l38
L20          818 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "INTESTINAL BACTERIA(L)PROBIOT
                 IC"/CT OR PROBIOTICS/CT
L21         1969 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?PROBIOTIC?/BI OR L20
L22        14077 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LACTOBACILLUS+NT/CT
L23         2834 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BIFIDOBACTERIUM+NT/CT
L24        16997 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21 OR L22 OR L23
L25          383 SEA FILE=REGISTRY ABB=ON  PLU=ON  ALGINATE/CNS
L26        18995 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25
L27            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "ALGINIC ACID"/CN
L28        18995 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27 OR L26
L29          137 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND L28
L37           53 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L29 AND P/DT
L38           20 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?CAPSUL?/BI AND L37


=> b medl
FILE 'MEDLINE' ENTERED AT 10:34:13 ON 06 AUG 2004

 FILE LAST UPDATED: 5 AUG 2004 (20040805/UP).  FILE COVERS 1951 TO DATE.

 On February 29, 2004, the 2004 MeSH terms were loaded.  See HELP RLOAD
 for details. OLDMEDLINE now back to 1951.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2004 vocabulary.  See http://www.nlm.nih.gov/mesh/ and
 http://www.nlm.nih.gov/pubs/techbull/nd03/nd03_mesh.html for a
 description of changes.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d que l47
L39          1390 SEA FILE=MEDLINE ABB=ON  PLU=ON  PROBIOTICS/CT
L41          9123 SEA FILE=MEDLINE ABB=ON  PLU=ON  LACTOBACILLUS+NT/CT
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=> b hcaplus
FILE 'HCAPLUS' ENTERED AT 10:02:26 ON 06 AUG 2004
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FILE COVERS 1907 - 6 Aug 2004  VOL 141 ISS 6
FILE LAST UPDATED: 4 Aug 2004  (20040804/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que l33
L33           9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PORUBCAN RANDOLPH S"/AU


=> d all l33 1-9

L33  ANSWER 1 OF 9  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:717326  HCAPLUS
DN   139:245319
ED   Entered STN:  12 Sep 2003
TI   Manure- and Bacillus-based fertilizer compositions
IN   Porubcan, Randolph S.
PA   Microbes, Inc., USA
SO   U.S. Pat. Appl. Publ., 18 pp.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  C05F011-08
NCL  071006000
CC   19-6 (Fertilizers, Soils, and Plant Nutrition)
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
PI   US 2003167811        A1    20030911    US 2001-38676          20011231
PRAI US 2001-38676                20011231
CLASS
 PATENT NO.       CLASS  PATENT FAMILY CLASSIFICATION CODES
 ---------------  -----  ----------------------------------------------
 US 2003167811    ICM    C05F011-08
                  NCL    071006000
AB   Fertilizer compns. are described, comprised of decontaminated manure and
     Bacillus spores, preferably a humic acid derived from lignite and,
     optionally, one or more of N, P and/or K compds., and combinations of
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≥2 of these compds. Preferred compns. are those wherein the ingredients are blended into an admixt. resulting in a granular product. Other preferred compns. are those blended into an admixt. resulting in a powdered product. Preferably, the ingredients are formed into hardened prills or pellets.

ST manure Bacillus spore fertilizer compn

IT Bacillus licheniformis
Bacillus subtilis
Brevibacillus laterosporus
Manure
(fertilizer compns. containing)

IT Superphosphates
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(fertilizer compns. containing)

IT Coal components
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(leonardite; fertilizer compns. containing)

IT Humic acids
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(lignite-derived; fertilizer compns. containing)

IT Fertilizers
RL: AGR (Agricultural use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
(manure- and Bacillus-based fertilizer compns.)

IT Humic acids
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(potassium salts; fertilizer compns. containing)

IT Bacillus (bacterium genus)
(spores; fertilizer compns. containing)

IT 57-13-6, Urea, biological studies 6484-52-2, Ammonium nitrate, biological studies 7440-09-7, Potassium, biological studies 7631-99-4, Sodium nitrate, biological studies 7632-05-5, Sodium phosphate 7723-14-0, Phosphorus, biological studies 7727-37-9, Nitrogen, biological studies 7757-79-1, Potassium nitrate, biological studies 7758-23-8, Monocalcium phosphate 7758-87-4, Tricalcium phosphate 7778-80-5, Potassium sulfate, biological studies 7783-20-2, Ammonium sulfate, biological studies 10124-31-9, Ammonium phosphate 10124-37-5, Calcium nitrate 16068-46-5, Potassium phosphate
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(fertilizer compns. containing)

L33 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:413865 HCAPLUS
DN 138:384696
ED Entered STN: 30 May 2003
TI Administering Bacillus laterosporus to increase poultry feed conversion and weight gain
IN **Porubcan, Randolph S.**
PA Microbes, Inc., USA
SO U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K038-48
ICS A23K001-00
NCL 424093460; 426053000; 426002000
CC 18-6 (Animal Nutrition)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003099624	A1	20030529	US 2002-128186	20020423
PRAI	US 2001-303196P	P	20010705		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003099624	ICM	A61K038-48
	ICS	A23K001-00
	NCL	424093460; 426053000; 426002000

AB Disclosed is a process for improving feed conversion and weight gain in poultry, including chickens, wherein Bacillus laterosporus, or any microorganism with a similar index, based on its cellular fatty acid profile of >0.5 to Bacillus laterosporus (including Bacillus laterosporus strain CM-33 (ATCC Accession Number PTA-3952)) is administered to poultry. Strain CM-33 of Bacillus laterosporus was isolated from soil and has a similarity index of 76% to Bacillus laterosporus. The administration of strain CM-33 is preferably divided into daily doses of about 2.0 million colony forming units (cfu)/day and continued for about 40 days of the growth cycle. The cells or spores can be administered through the bird's drinking water or by other methods, including spraying them onto the bird's feed.

ST poultry feed Bacillus growth promoter

IT Brevibacillus laterosporus
Coccidiostats
Feed additives
Feeding experiment
Gallus domesticus
Poultry
Soybean (Glycine max)
Spore
Zea mays
(administering Bacillus laterosporus to increase poultry feed conversion and weight gain)

IT Fatty acids, biological studies
Growth factors, animal
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(administering Bacillus laterosporus to increase poultry feed conversion and weight gain)

IT Gallus domesticus
(broiler; administering Bacillus laterosporus to increase poultry feed conversion and weight gain)

IT 22373-78-0, Coban
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(administering Bacillus laterosporus to increase poultry feed conversion and weight gain)

L33 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:172876 HCAPLUS
ED Entered STN: 07 Mar 2003
TI Bacillus laterosporus strain cm-3 for promoting grain crop yields
IN **Porubcan, Randolph S.**
PA Microbes, Inc., USA
SO U.S. Pat. Appl. Publ.
CODEN: USXXCO
DT Patent
LA English
IC ICM A01N063-00

NCL 504117000
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003045428	A1	20030306	US 2002-101344	20020319
PRAI	US 2001-303215P	P	20010705		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 20030045428	ICM	A01N063-00
	NCL	504117000

AB Disclosed are processes for increasing the yields of grain crops, e.g., rice, corn, alfalfa, oats, wheat, barley, hops, and the like, through application of spores or live cells of strain CM-3 of Bacillus laterosporus(deposited at the American Type Culture Collection, P.O. Box 1549, Manassas Va. 20108, under Deposit Designation Number PTA-3593). Application of spores of strain CM-3 to rice plants at between 0.6 trillion to 50 trillion (0.6+10"up°12 "up° to 5.0+10"up°13"up°) colony forming units ("cfu")/hectare ("ha")/crop cycle, substantially increased the yield of grain/ha, up to 7.3 metric tons/ha. The applications of strain CM-3 to rice plants can be started during the nursery period, before the plants are placed in the rice paddy.

L33 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1990:637853 HCAPLUS
DN 113:237853
ED Entered STN: 22 Dec 1990
TI Membrane-forming veterinary antibacterial teat dip
IN Brokken, Kyle; **Porubcan, Randolph S.**
PA Quali Tech, Inc., USA
SO U.S., 7 pp. Cont.-in-part of U.S. Ser. No. 62,278, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM A61K031-205
ICS A61K031-195; A61K035-78
NCL 514517000
CC 63-6 (Pharmaceuticals)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4945110	A	19900731	US 1989-339197	19890414
PRAI	US 1987-62278		19870615		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4945110	ICM	A61K031-205
	ICS	A61K031-195; A61K035-78
	NCL	514517000

AB A viscosity-stabilized, aqueous topically adherent, self-supporting film-forming veterinary antibacterial composition effective for the control of bovine mastitis, comprises (1) an aliphatic sulfate or sulfonate salt detergent 4-8%, (2) lactic acid or its salt 0.01-10%, (3) a bactericidal organic acid selected from benzoic acid, sorbic acid, citric acid, lower alkanoic acids, salts or mixts. thereof 0.001-0.100%, (4) a film-forming pectin or gum 0.02-2.5%, and (5) a water-soluble C≤6 aliphatic polyol emollient. The composition is topically applied to the teats and udder

quarters of bovine animals and dried to form a flexible protective film-forming antibacterial barrier. A solution containing Na benzoate 0.05, sorbic acid 0.05, and FD&C blue number 1 0.0601lb and a solution containing citrus pectin 18.000, Na lauryl sulfate (29% aqueous solution) 172.414, and lactic acid (88% aqueous solution) 10.000lb were mixed along with 50lb glycerin. The solution exhibited 99.95% growth inhibition of Escherichia coli on the teat of dairy cows.

ST bovine mastitis antibacterial soln sulfate lactate; teat dip mastitis antibacterial carboxylate detergent

IT Mastitis
(control of, antibacterial carboxylic acid-containing teat dip solution for)

IT Gums and Mucilages
(veterinary antibacterial topical solution containing, as film-forming agent, in bovine mastitis prevention)

IT Detergents
Carboxylic acids, biological studies
Sulfonates
RL: BIOL (Biological study)
(veterinary antibacterial topical solution containing, for mastitis prevention)

IT Alcohols, biological studies
RL: BIOL (Biological study)
(polyhydric, veterinary antibacterial topical solution containing, as emollient, in bovine mastitis prevention)

IT Pharmaceutical dosage forms
(solns., topical, sulfate detergent and antibacterial carboxylic acid in, as teat dip, for mastitis control)

IT 9046-38-2D, Polygalacturonic acid, methoxylated derivs.
RL: BIOL (Biological study)
(from citrus peel, veterinary antibacterial topical solution containing, as film-forming agent, in bovine mastitis prevention)

IT 50-70-4, Sorbitol, biological studies 56-81-5, Glycerin, biological studies 57-55-6, Propylene glycol, biological studies 107-21-1, Ethylene glycol, biological studies
RL: BIOL (Biological study)
(veterinary antibacterial topical solution containing, as emollient, in bovine mastitis prevention)

IT 9000-07-1, Carrageenan 9000-30-0, Guar gum 9000-69-5, Pectin
RL: BIOL (Biological study)
(veterinary antibacterial topical solution containing, as film-forming agent, in bovine mastitis prevention)

IT 50-21-5, Lactic acid, biological studies 65-85-0, Benzoic acid, biological studies 77-92-9, Citric acid, biological studies 110-44-1, Sorbic acid 151-21-3, Sodium lauryl sulfate, biological studies 151-41-7D, salts 532-32-1, Sodium benzoate 7664-93-9D, Sulfuric acid, alkyl esters, salts
RL: BIOL (Biological study)
(veterinary antibacterial topical solution containing, for mastitis prevention)

L33 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1987:457718 HCAPLUS

DN 107:57718
ED Entered STN: 21 Aug 1987
TI Wort-sequestered divalent metal salts
IN Brokken, Kyle A.; **Porubcan, Randolph S.**
PA Quali Tech, Inc., USA
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A23K001-06
ICS A23K001-175
CC 17-6 (Food and Feed Chemistry)
Section cross-reference(s): 19
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8701012	A1	19870226	WO 1986-US1697	19860818
	W: JP				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	US 4661358	A	19870428	US 1985-768961	19850823
	EP 235252	A1	19870909	EP 1986-905519	19860818
	EP 235252	B1	19910410		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 63500635	T2	19880310	JP 1986-504607	19860818
	AT 62381	E	19910415	AT 1986-905519	19860818
	CA 1301527	A1	19920526	CA 1987-527216	19870113
PRAI	US 1985-768961		19850823		
	EP 1986-905519		19860818		
	WO 1986-US1697		19860818		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 8701012	ICM	A23K001-06
	ICS	A23K001-175

AB A water-dispersible composition containing added nutrient divalent metal ions sequestered by an alkali-modified brewer's wort is provided which is useful as a trace element source for animal feeds and fertilizers. Brewer's wort 30 weight% was added to a liquid mixer and stirred at .apprx.15-32°. The pH was adjusted to 11.0 by slow addition of NaOH 1.3 weight%. The conditioned wort was then pumped into a dry mixer containing CuSO4 40 weight%, and hydrated silica 27.7 weight% was added to yield a damp, free-flowing powder, which was dried at 205° to a final moisture level of 4-6%. The dry product was ground and combined with polysorbate 80 1.0 weight% in a dry mixer to yield the final product. When analyzed using a cupric ion-specific electrode, 75-100% of the Cu was bound to the matrix. The Cu of this composition had 2- and 4-fold the bioavailability of CuSO4 and CuO in tests with rats, and it had good storage stability.
ST trace element stabilization wort feed fertilizer; premix feed trace element wort; sequestration trace element wort feed fertilizer
IT Trace elements, biological studies
RL: BIOL (Biological study)
(divalent, sequestration of, with alkali-modified wort, for water-dispersible stable feed and fertilizer additives)
IT Surfactants
(polysorbate, trace element water-dispersible stable compns. containing, for feed and fertilizers)
IT Feed
Fertilizers

RL: BIOL (Biological study)
(trace element water-dispersible stable additives for)
IT Worts
(trace elements sequestration with alkali-modified, in water-dispersible stable feed and fertilizer additives manufacture)
IT Alkali metal hydroxides
RL: BIOL (Biological study)
(trace elements sequestration with wort modified with, in water-dispersible stable feed and fertilizer additives manufacture)
IT Metals, biological studies
RL: BIOL (Biological study)
(divalent, sequestration of, with alkali-modified wort, for water-dispersible stable feed and fertilizer additives)
IT Surfactants
(nonionic, trace element water-dispersible stable compns. containing, for feed and fertilizers)
IT 7631-86-9D, Silica, hydrated
RL: BIOL (Biological study)
(filler, trace element water-dispersible stable compns. containing, for feed and fertilizers)
IT 1343-98-2
RL: BIOL (Biological study)
(filler, true element water-dispersible stable compns. containing, for feed and fertilizers)
IT 7439-89-6, Iron, biological studies 7439-95-4, Magnesium, biological studies 7439-96-5, Manganese, biological studies 7440-48-4, Cobalt, biological studies 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies 7733-02-0, Zinc sulfate 7758-98-7, biological studies 7785-87-7, Manganese sulfate
RL: BIOL (Biological study)
(sequestration of, with alkali-modified wort, for water-dispersible stable feed and fertilizer additives)
IT 7664-93-9D, Sulfuric acid, metal salts
RL: PROC (Process)
(sequestration of, with alkali-modified wort, in trace element water-dispersible stable additives manufacture for feed and fertilizer)
IT 9005-65-6, Polysorbate 80
RL: BIOL (Biological study)
(trace element water-dispersible stable compns. containing, for feed and fertilizers)
IT 1310-73-2, Sodium hydroxide, biological studies
RL: BIOL (Biological study)
(trace elements sequestration with wort modified with, in water-dispersible stable feed and fertilizer additives manufacture)

L33 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1981:119769 HCAPLUS
DN 94:119769
ED Entered STN: 12 May 1984
TI Culture concentrates for direct vat set cheese production
IN **Porubcan, Randolph S.**; Sellars, Robert L.
PA Hansen's Chr., Laboratory, Inc., USA
SO Can., 21 pp.
CODEN: CAXXA4
DT Patent
LA English
IC C12K003-00; C12B001-26; A23C019-02
CC 17-3 (Foods)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 1092040	A1	19801223	CA 1978-300177	19780331
	US 4115199	A	19780919	US 1977-793483	19770504
	GB 1552909	A	19790919	GB 1978-13366	19780405
	AU 7834813	A1	19791011	AU 1978-34813	19780405
	AU 517009	B2	19810702		
	DE 2817326	A1	19781116	DE 1978-2817326	19780420
	DK 7801904	A	19781105	DK 1978-1904	19780502
	SE 7805145	A	19781105	SE 1978-5145	19780503
	NL 7804815	A	19781107	NL 1978-4815	19780503
	NO 7801580	A	19781107	NO 1978-1580	19780503
	FR 2389673	A1	19781201	FR 1978-13170	19780503
PRAI	US 1977-793483		19770504		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
CA 1092040	IC	C12K003-00IC C12B001-26IC A23C019-02

AB Improved separation of lactic acid bacteria, used in cheese manufacture, from culture media by centrifugation is obtained by adding polyphosphate to the mixture Thus, 450 gal medium containing 6% milk solids, 1% glucose and 1% yeast extract was inoculated with a mixed subculture of Streptococcus lactis and S. cremoris and incubated for 10-12 h. The culture was then treated with Na hexametaphosphate to 2% and centrifuged. A 20-fold concentration of bacteria was obtained and 360 mL of the concentrate was used to inoculate 5000 lb of milk for Cheddar cheese manufacture

ST cheese bacteria concn polyphosphate; lactic acid bacteria concn polyphosphate

IT Leuconostoc cremoris
Streptococcus cremoris
Streptococcus diacetylactis
Streptococcus lactis
(concentration of, for cheese manufacture, polyphosphate improvement of)

IT Cheese
(manufacture of, starter bacteria concentration in, polyphosphate improvement of)

IT Bacteria
(lactic acid, concentration of, for cheese manufacture, polyphosphate improvement of)

IT 7758-29-4 10124-56-8
RL: BIOL (Biological study)
(lactic acid bacteria concentration in presence of, for cheese manufacture)

L33 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1979:573410 HCAPLUS
DN 91:173410
ED Entered STN: 12 May 1984
TI Lactic starter culture concentrates
AU **Porubcan, Randolph S.**; Sellars, Robert L.
CS Chr. Hansen's Lab. Inc., Milwaukee, WI, 53706, USA
SO Microb. Technol. (2nd Ed.) (1979), Volume 1, 59-92. Editor(s): Peppler, Henry J.; Perlman, D. Publisher: Academic, New York, N. Y.
CODEN: 41NCAU

DT Conference; General Review
LA English
CC 17-0 (Foods)
AB A review with 75 refs.
ST review lactic bacteria starter conc
IT Bacteria
(lactic acid, concentrated starter cultures of)

L33 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1978:117001 HCAPLUS
DN 88:117001
ED Entered STN: 12 May 1984
TI A laser Raman study of lysozyme denaturation
AU **Porubcan, Randolph S.**; Watters, Kenneth L.; McFarland, James T.
CS Dep. Chem., Univ. Wisconsin, Milwaukee, WI, USA
SO Archives of Biochemistry and Biophysics (1978), 186(2), 255-64
CODEN: ABBIA4; ISSN: 0003-9861
DT Journal
LA English
CC 7-5 (Enzymes)
AB The Raman spectrum of chemical denatured lysozyme was studied. The denaturants studied included Me2SO, LiBr, guanidine-HCl, Na dodecyl sulfate, and urea. The intensity of the amide III band at 1260 cm-1 (assigned to strongly H-bonded α-helix structure) relative to the intensity of the amide III band near 1240 cm-1 (assigned to less strongly H-bonded groups) was used as a parameter for comparison with other phys. parameters used to assess denaturation. The correlation between this Raman parameter and denaturation as evidenced by enzyme activity and viscosity measurements is good, leading to the conclusion that the amide III Raman spectrum is useful for assessing the degree of denaturation. The Raman spectrum clearly depends on the type of denaturant employed, suggesting that there is not one unique denatured state for lysozyme. The data, as interpreted, place constraints on the possible models for lysozyme denaturation. One of these is that the simple 2-state model does not seem consistent with the observed Raman spectral changes.
ST lysozyme denaturation Raman
IT Raman spectra
(of lysozyme, denaturation in relation to)
IT 50-01-1 57-13-6, properties 67-68-5, properties 151-21-3, properties 7550-35-8
RL: BIOL (Biological study)
(denaturation of lysozyme by, Raman spectra of)
IT 9001-63-2
RL: PROC (Process)
(denaturation of, Raman spectra of)

L33 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1976:15675 HCAPLUS
DN 84:15675
ED Entered STN: 12 May 1984
TI Stabilized dry cultures of lactic acid-producing bacteria
IN **Porubcan, Randolph S.**; Sellars, Robert L.
PA Hansen's, Chr., Laboratory, Inc., USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
IC C12K

NCL 195059000
CC 16-1 (Fermentations)
Section cross-reference(s): 17
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3897307	A	19750729	US 1974-517371	19741023
	CA 1041929	A1	19781107	CA 1975-223858	19750404
	AU 7580144	A1	19760617	AU 1975-80144	19750415
	BE 828181	A1	19750818	BE 1975-155610	19750421
	GB 1469218	A	19770406	GB 1975-18243	19750501
	NL 7505227	A	19760427	NL 1975-5227	19750502
	NO 7501586	A	19760426	NO 1975-1586	19750505
	DK 7501999	A	19760424	DK 1975-1999	19750506
	DE 2520128	A1	19760429	DE 1975-2520128	19750506
	FR 2299404	A1	19760827	FR 1975-14218	19750506
	CH 596302	A	19780315	CH 1975-5828	19750508
	SE 7507580	A	19760426	SE 1975-7580	19750702
	SE 422079	B	19820215		
	SE 422079	C	19820527		
PRAI	US 1974-517371		19741023		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3897307	IC	C12K
	NCL	195059000

AB The viability decline in dried cultures of lactic acid-producing bacteria was arrested by adding to the culture free acids or salts of ascorbic acid with either glutamic acid or aspartic acid prior to drying. Thus, Lactobacillus helveticus viable counts per g decreased from 47 + 108 to <1.0 + 107 after 3 months in untreated freeze-dried cultures whereas cultures treated with ascorbic acid 40, monosodium glutamate 25, and inositol 25 g and pH adjusted to 6.10 with 50% NaOH prior to freeze-drying experienced a decline of only 55 + 108 to 36 + 108 viable cells/g in the same time period.

ST lactate bacteria freeze dry stabilization; ascorbate stabilization bacteria freeze dry; glutamate stabilization bacteria freeze dry; aspartate stabilization bacteria freeze dry

IT Bacteria
(lactic acid, stabilization of viability of dry cultures of)

IT Freeze drying
(of lactic acid bacteria, ascorbate, aspartate, and glutamate stabilization of viability in)

IT 50-81-7, biological studies 56-84-8, biological studies 56-86-0, biological studies 142-47-2 3792-50-5
RL: BIOL (Biological study)
(lactic acid bacteria viability stabilization with, during drying)

=>